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TITLE: Tropical Medicine Imaging Project (TMIP) Phase II

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12b. DISTRIBUTION CODE**13. ABSTRACT (Maximum 200 Words)**

The objective of this Tropical Medicine Central Resource (TMCR) is to create a global resource for health care providers on Tropical Medicine, with emphasis on the radiology of tropical diseases. This resource would be available on CD-ROM, but would be more universally available over the Internet. By having such a resource available, it will be much more likely that appropriate diagnoses will be made in a timely fashion with corresponding definitive treatment. This will result in decreased morbidity and mortality in both civilian and military populations, and a tremendous cost saving from deferred medical transports and decreased treatment time.

Implementation of the project will happen in various phases:

- Gleaning optimal images and information for the various diseases (performed by subject matter experts)
- Digitizing approved images/photographs
- Inserting images and text into an electronic format
- Connecting images/text into a database-driven search/retrieve engine
- Displaying information over the internet and reproducing information on CD-ROM

Deliverables listed on original SOW:

- Produce a working **demonstration** "Tropical Medicine Website" from a subset of archived collection of images.
- Produce a Tropical Medicine CD-ROM" from a **subset** of the archived collection of images.

14. SUBJECT TERMS

Tropical, medicine, radiology, imaging, CT, MR, Computed Tomography, Magnetic Resonance, X-Rays, bacteria, virus, fungi, tuberculosis, parasite, worms

15. NUMBER OF PAGES

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Table of Contents

Cover.....	1
SF 298.....	2
Table of Contents.....	3
Metrics Used to Demonstrate Success/Efficacy.....	5
Final Results.....	6
Problems Encountered.....	7
Potential For AMEDD-Wide Adoption.....	8
Conclusions.....	9
Appendices.....	10-33

Tropical Medicine Central Resource

PI: James G. Smirniotopoulos, M.D./Maurice Reeder, M.D.

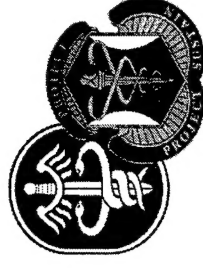
Location: USU

Funding:

Project Description:

Create distance learning materials for teaching the Imaging of Tropical Diseases using a website and a CDROM.

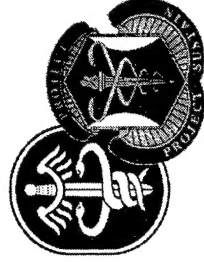
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Metrics Used to Demonstrate Success/Efficacy:

User Feedback regarding different modes of presentation of materials.
(Not yet implemented due to Copyright restrictions on content through
December 2001.



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Final Results:

XXXXX images scanned

YYYYY webpages created

Demonstration CDROM created



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Problems Encountered:

Evolving DoD regulations for *.mil Websites
Requirement for Website Access under ADA
Requirement to satisfy Publisher's copyright ownership
Original radiographs not available for all illustrations
Insufficient resources for all three phases of project:

Physical Archive
Digitization of Text and Images
Creation of Linked Webpages

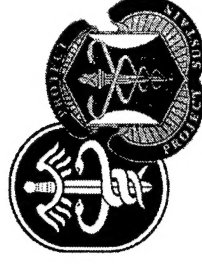


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Potential for AMEDD-Wide Adoption:
Distance Learning programs of DoD benefit from TMCR content.
Potential for “Learning Theory” Experiments utilizing various
methodologies to deliver similar content

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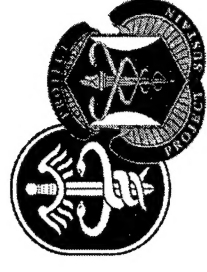


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Conclusions:

Instantaneous access to imaging studies from an encyclopedic library of pathologically proven tropical disease offers the potential to:

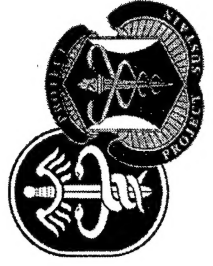
- 1) Improve knowledge of Healthcare practitioners at all levels
- 2) TMCR can function as a comparative Atlas of Disease Imaging
- 3) Wide distribution of content possible via Web and CDROM



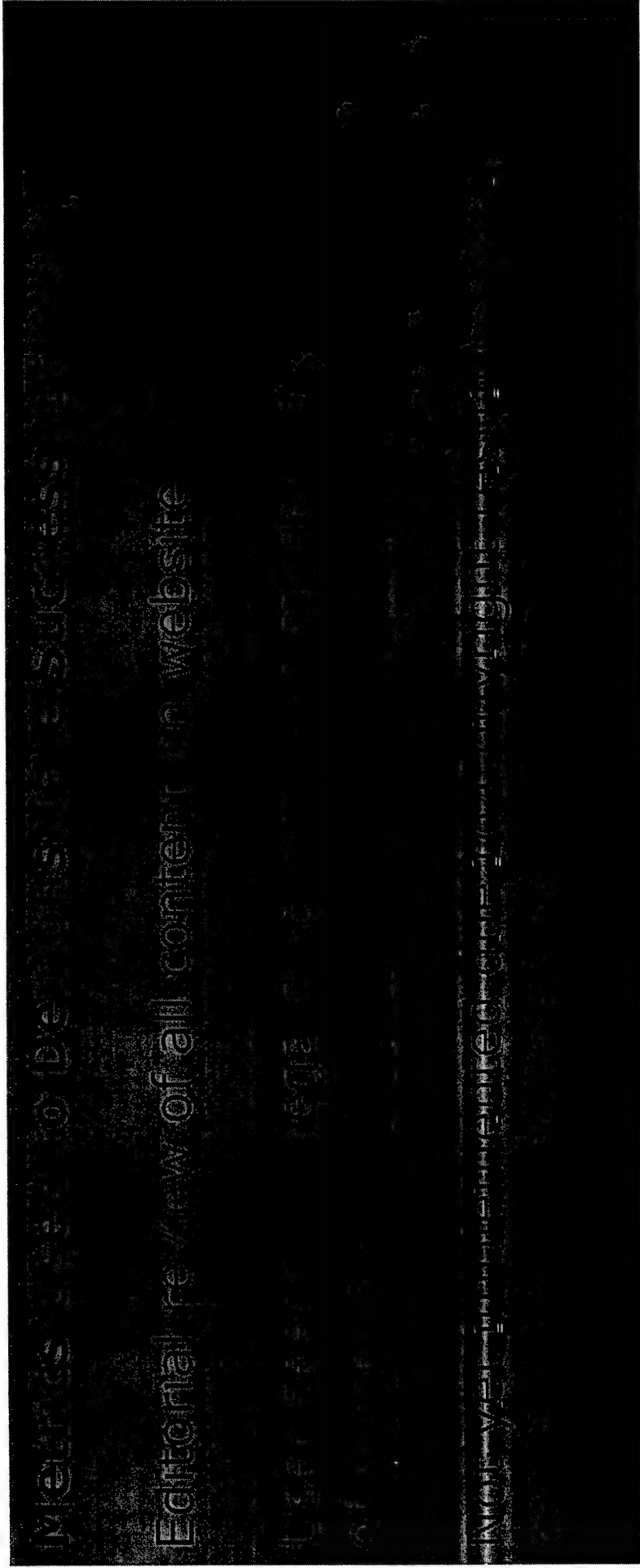
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James G. Sarrailhopoulos, M.D.
Marjorie Reeder, M.D.
Location: USUHS Bethesda, MD
Funding: MDA 90-F-56-0002

CDR James G. Sarrailhopoulos, M.D.
CDR Marjorie Reeder, M.D.
CDR James G. Sarrailhopoulos, M.D.
CDR Marjorie Reeder, M.D.

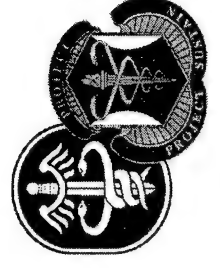
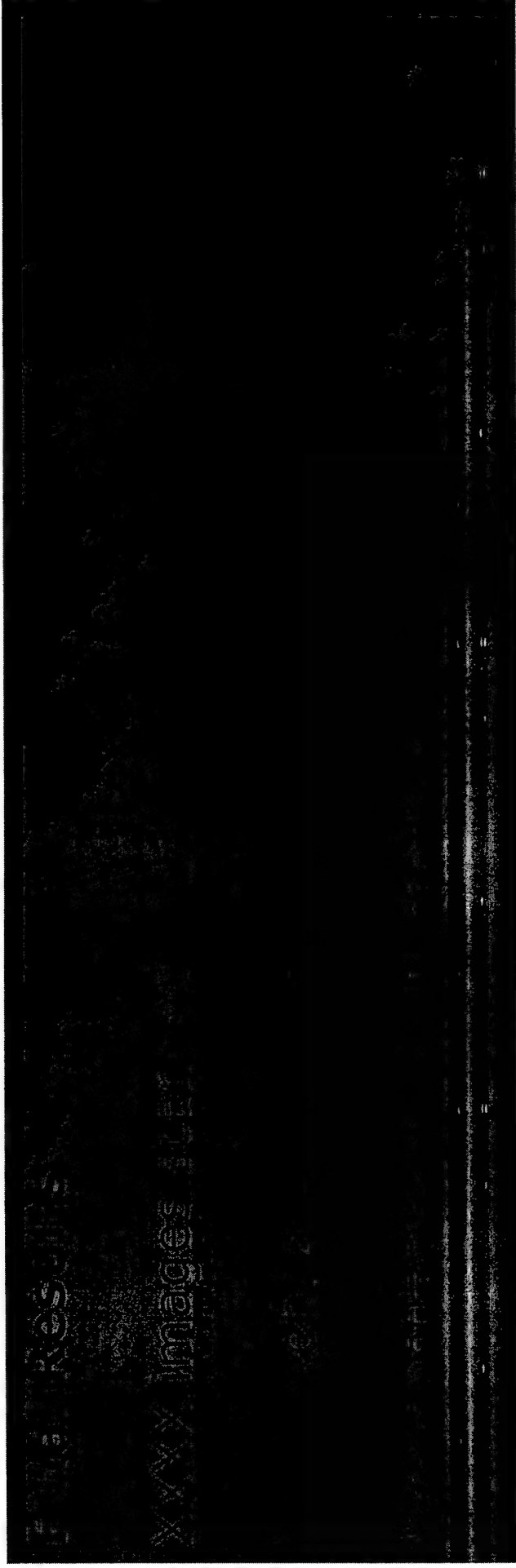


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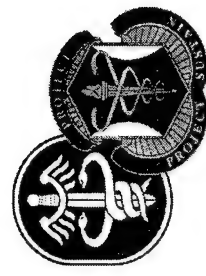
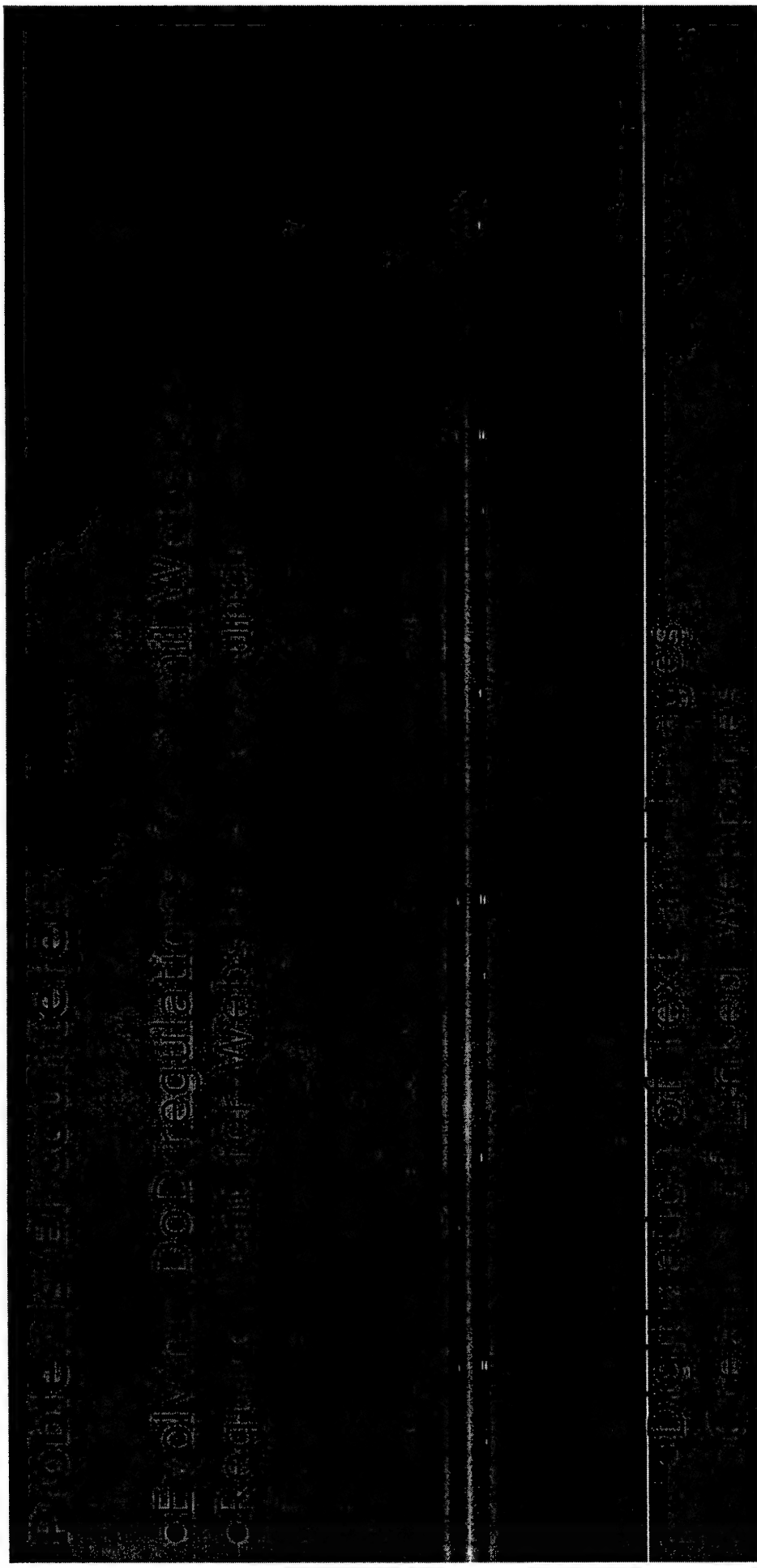
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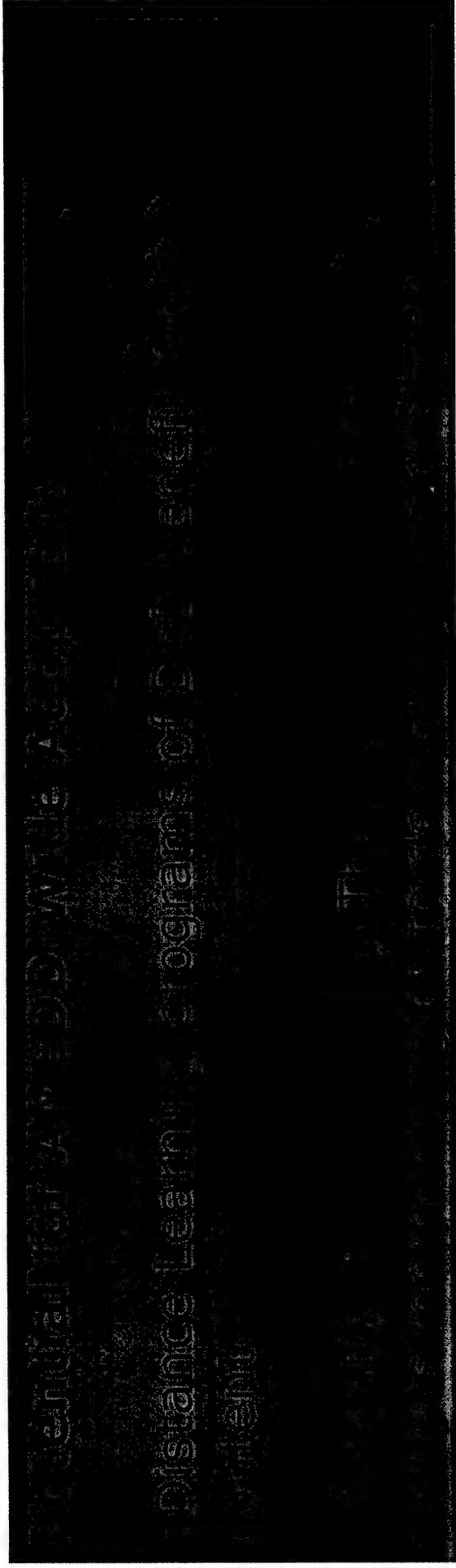
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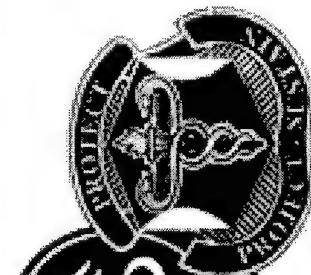
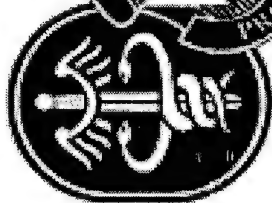


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International Registry of Tropical Imaging

The International Registry of Tropical Imaging serves as a worldwide archiving and retrieval source for imaging studies involved in the diagnosis of over 60 parasitic and infectious, neoplastic and miscellaneous diseases affecting over 2 billion people in the tropical and subtropical regions of the globe.



This is a project of the Radiology Department of
the Uniformed Services University.

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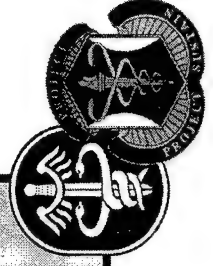
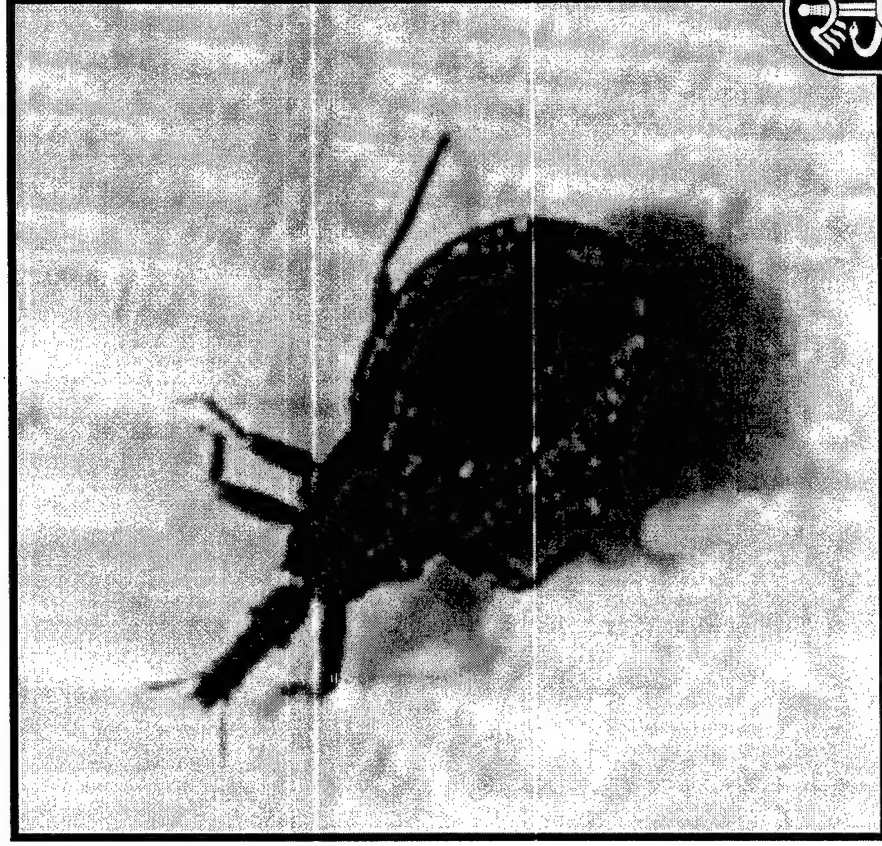
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Home | About TMCr | Index of Diseases | TMCr Mission | TMCr Staff | TMCr Guestbook

- Parasitic Diseases
 - Major Multi-System Diseases
 - Amebiasis
 - Chagas Disease
 - Introduction
 - Geographical Distribution
 - Epidemiology and Pathology
 - Laboratory Diagnosis
 - Clinical Diagnosis
 - Imaging Diagnosis
 - Differential Diagnosis
 - References
 - Hydatid Disease
 - Schistosomiasis
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Home | About TCMR | Index of Diseases | TCMR Mission | TCMR Staff | TCMR Guestbook

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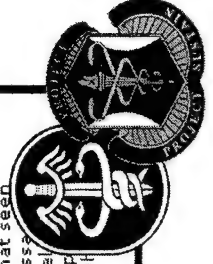
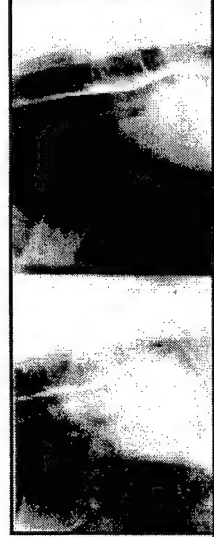
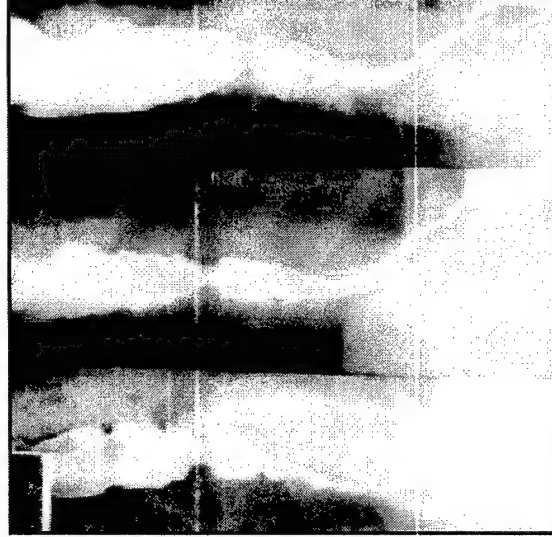
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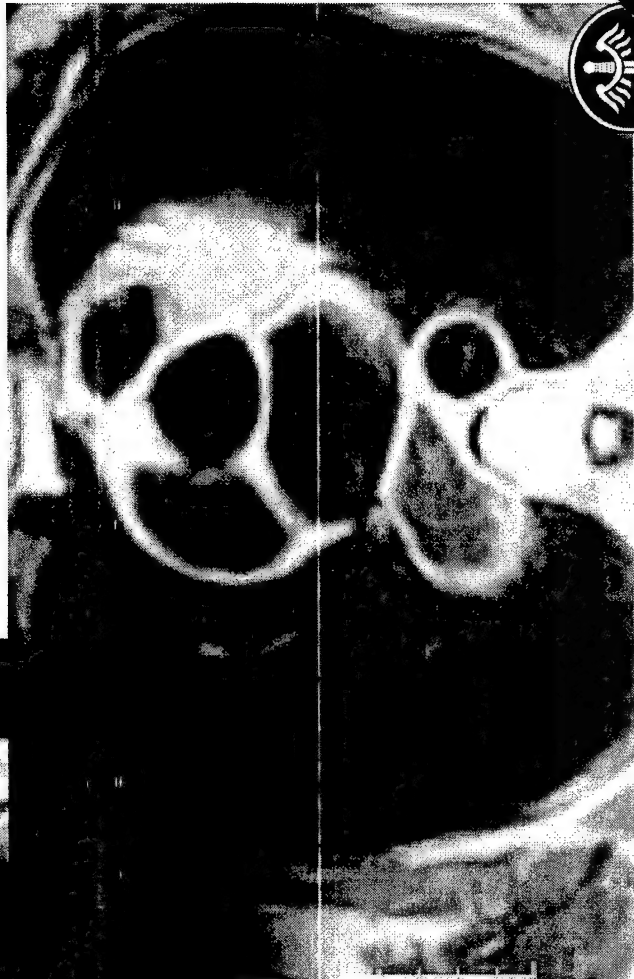
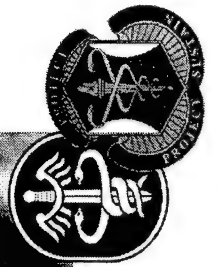
NEXT

Esophagus

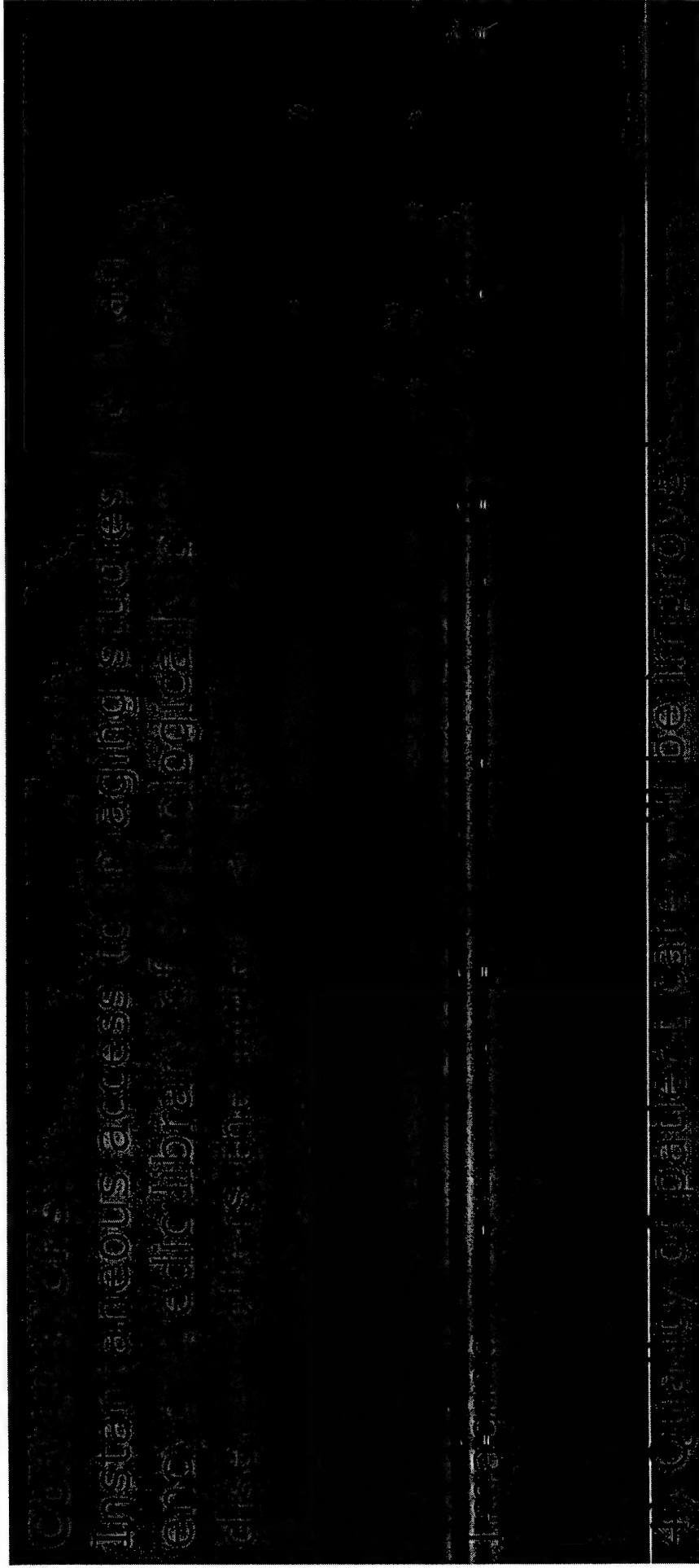
In the esophagus, early changes of motor dysfunction are hypercontractility and increased tone and hypertrophy of the circular muscle layer, often resulting in dysphagia. Later, as denervation progresses, there is decompensation, dilatation and stasis. Food may become lodged in the esophagus and cause local irritation, leading to inflammation, ulceration, bleeding, perforation and fistulas.

The earliest roentgen manifestations of Chagas' disease in the esophagus are of motor dysfunction. Initially, tone is maintained and there is little or no dilatation. Gradually increasing disturbances in tone, rhythm and motility over a number of years give the appearance of bizarre, dysrhythmic contractions on barium swallow (Fig. 4.8). In severe infections, however, there may be an extremely dilated and flaccid esophagus with a transverse diameter of 7 cm or more, exhibiting marked loss of tone with weak, uncoordinated contractions. The appearance of advanced megaesophagus both on plain radiographs of the chest and on barium swallow is remarkably similar to achalasia. In both entities the dilated esophagus appears as a vertical density along the entire right paramediastinal border on frontal films, usually distended with air and sometimes with an air-fluid level if the patient has recently ingested liquids (Figs. 4.9, 4.10, 4.11, 4.12). A tapered distal esophageal segment down to the cardiac sphincter is seen in Chagas' megaesophagus similar to that seen in achalasia. There may be some delay in passage of food through this area because of failure of relaxation and motor incoordination at the level of the sphincter as well as lack of propulsive peristalsis through the esophagus.



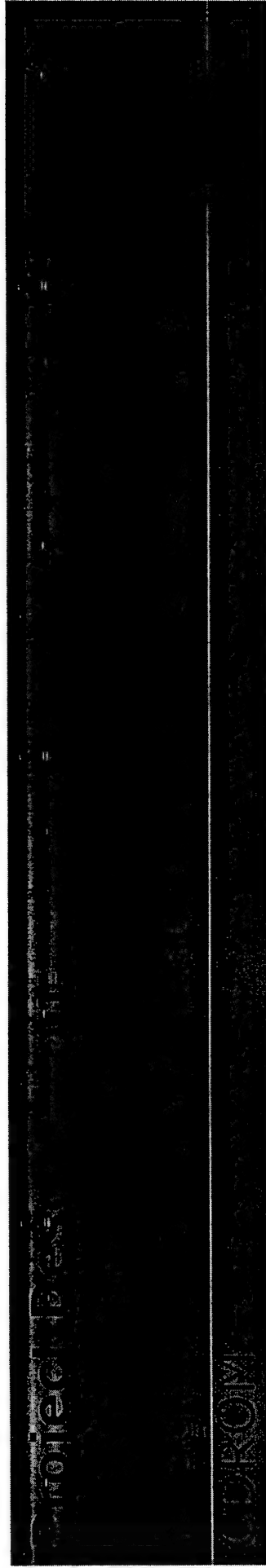
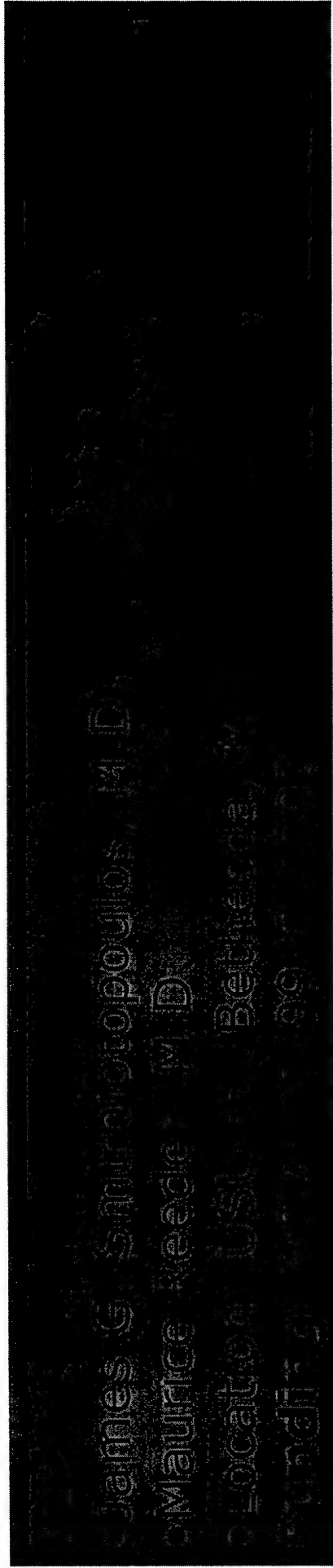


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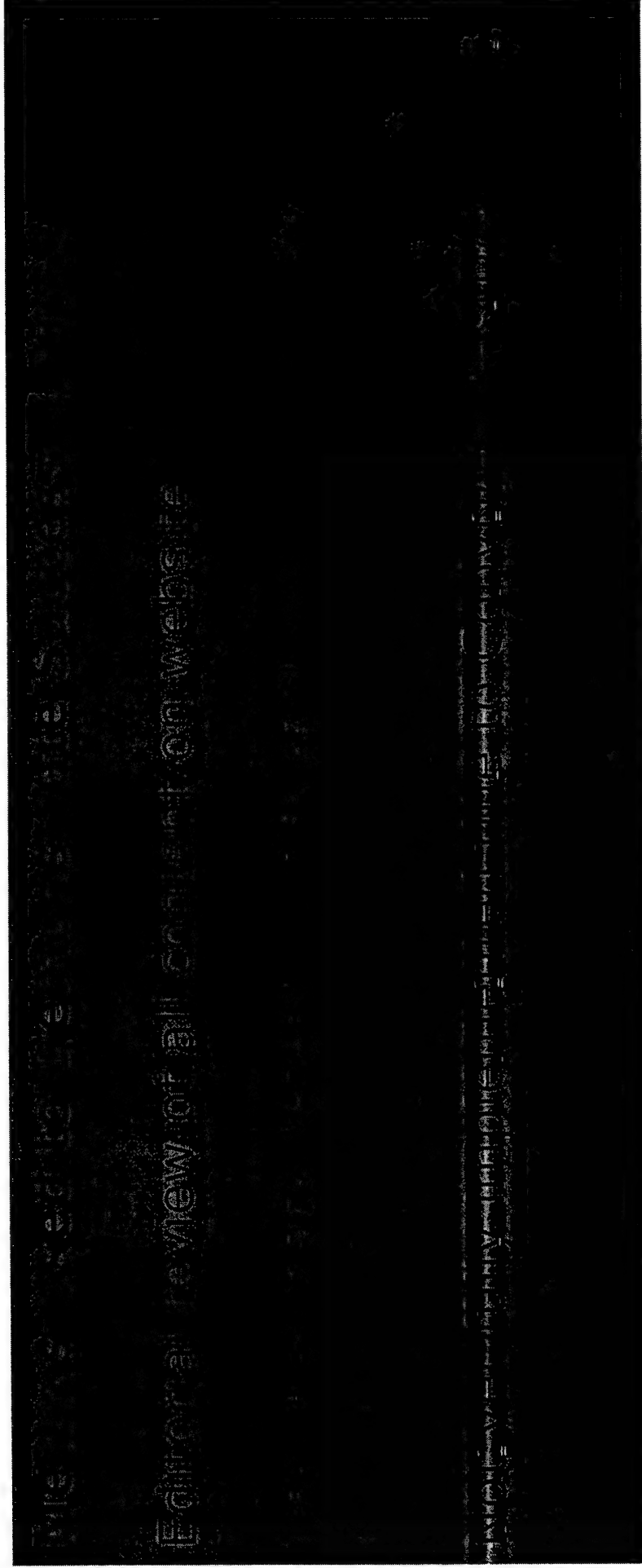
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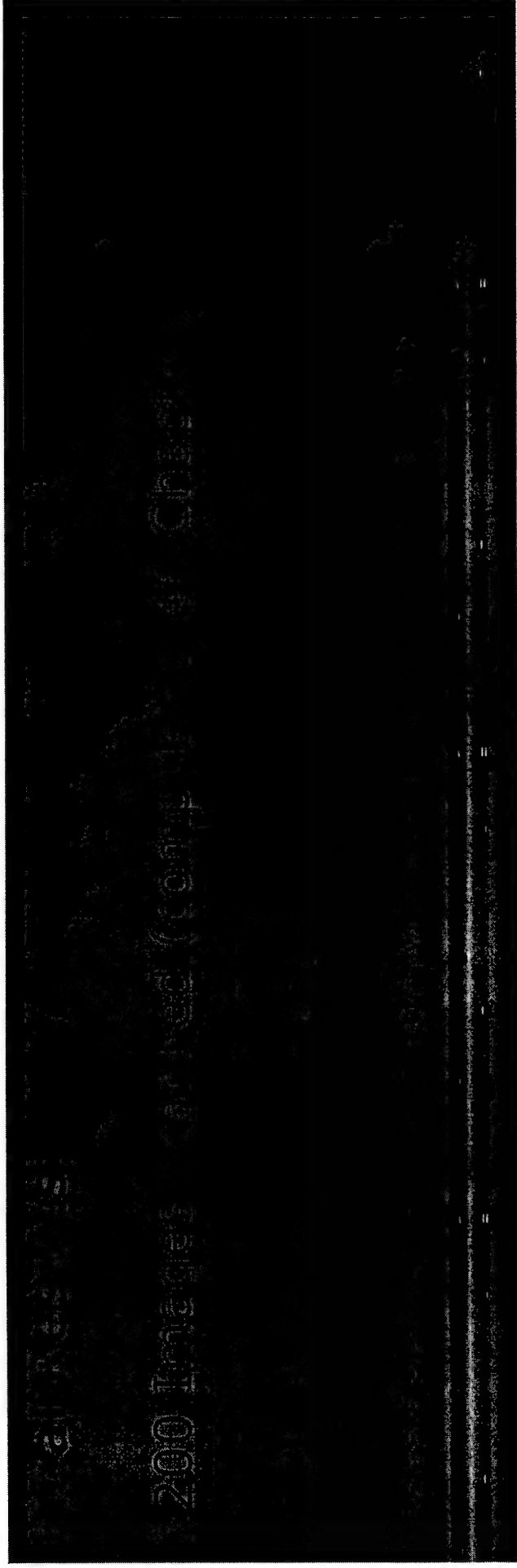
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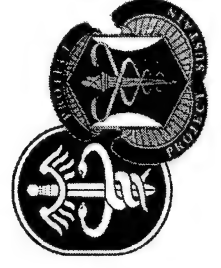
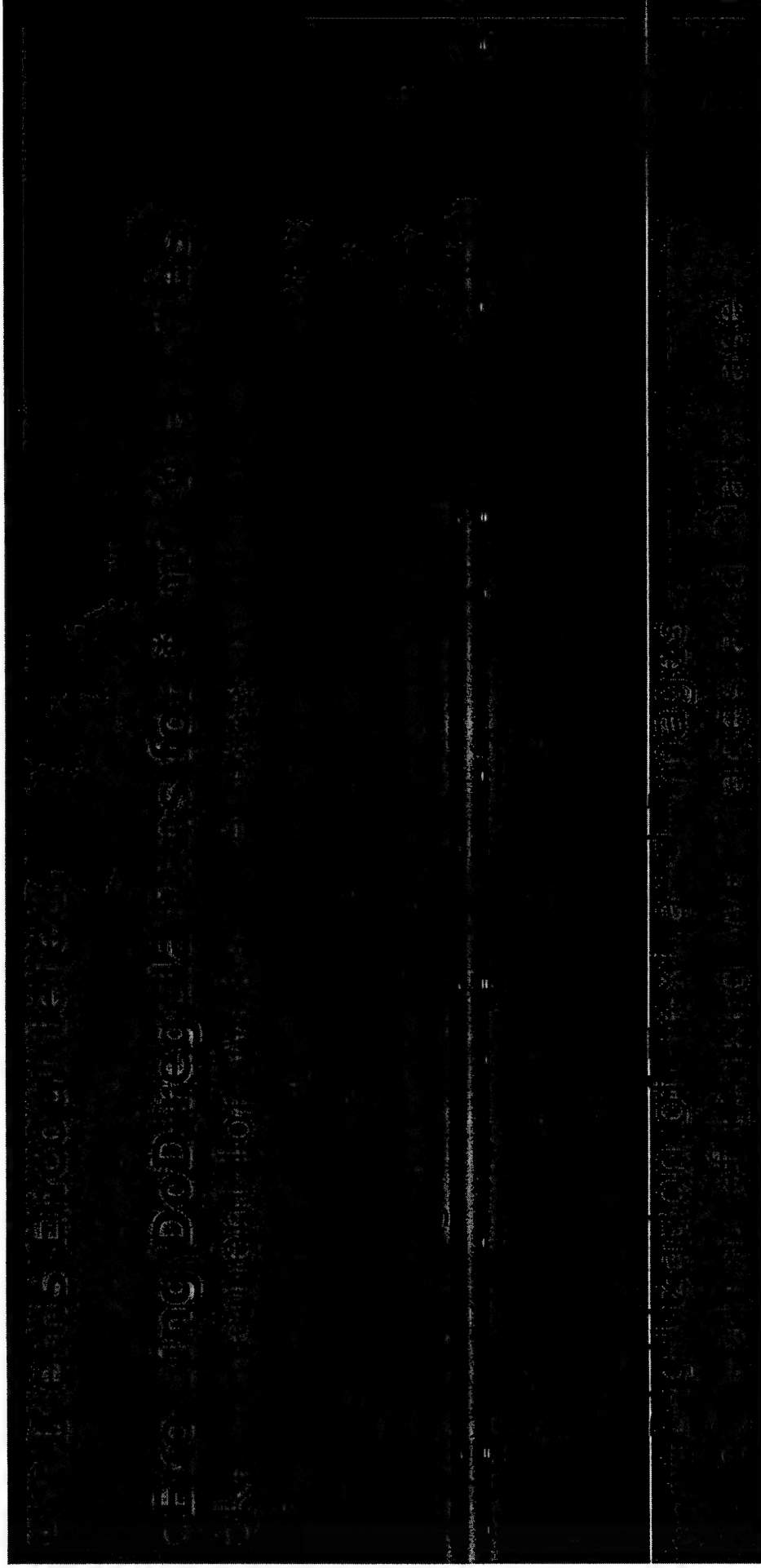
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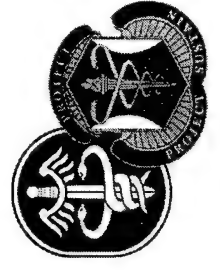
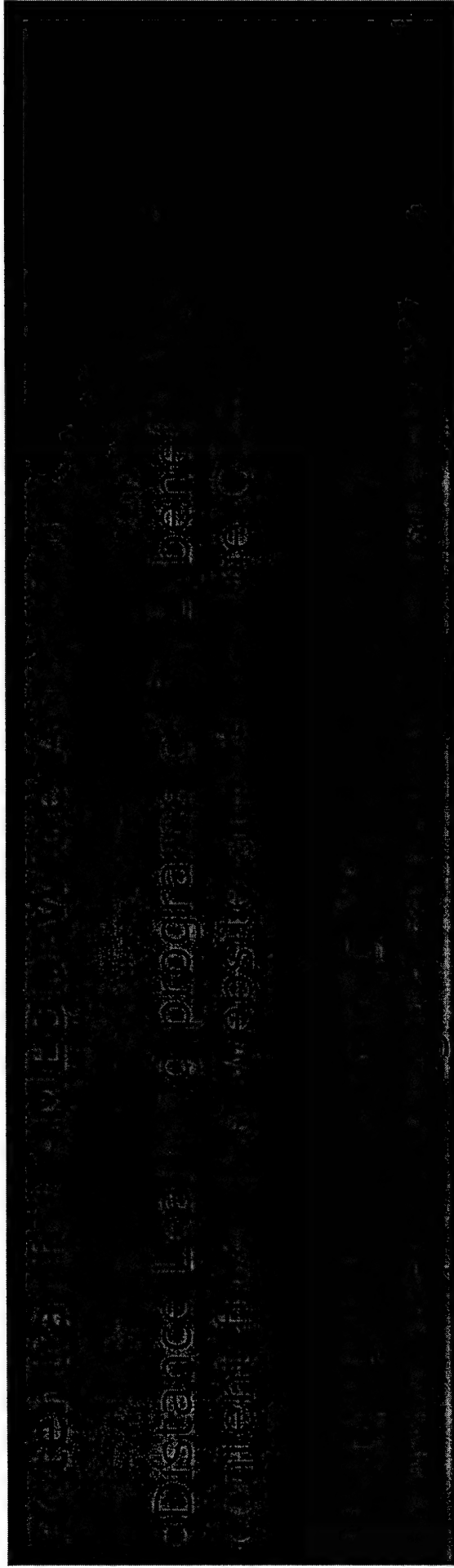
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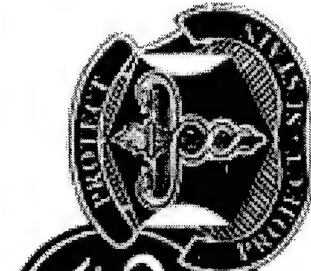
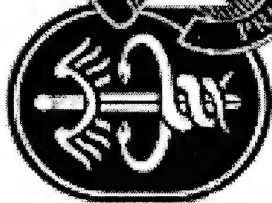


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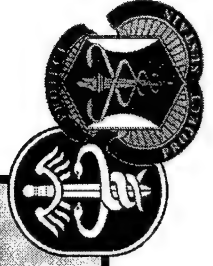
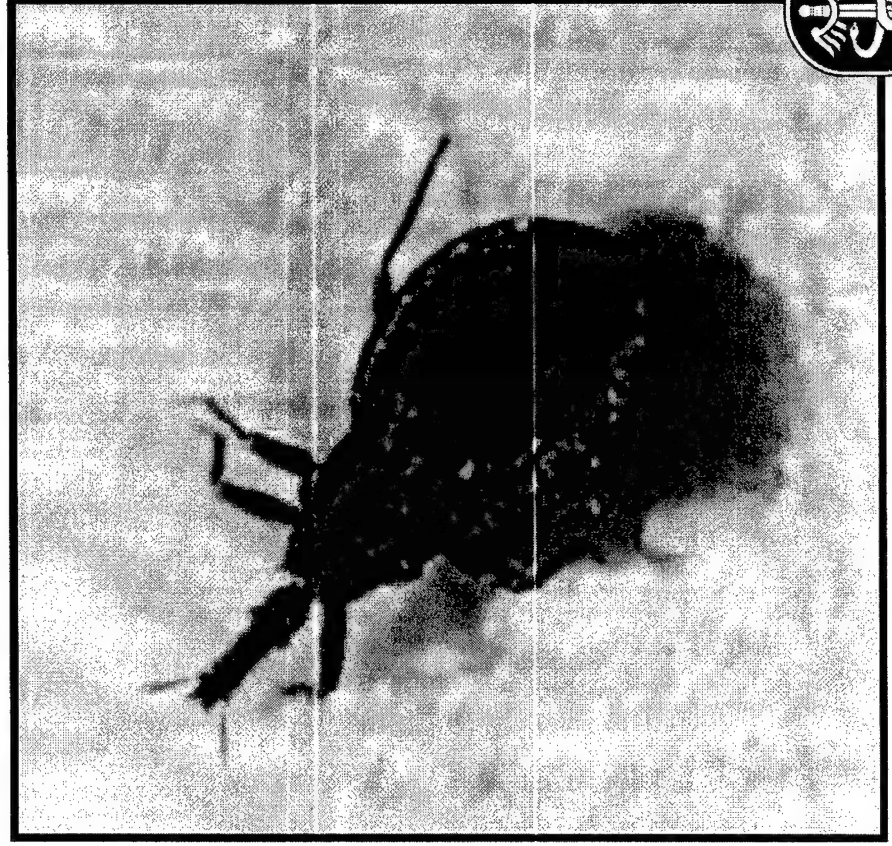
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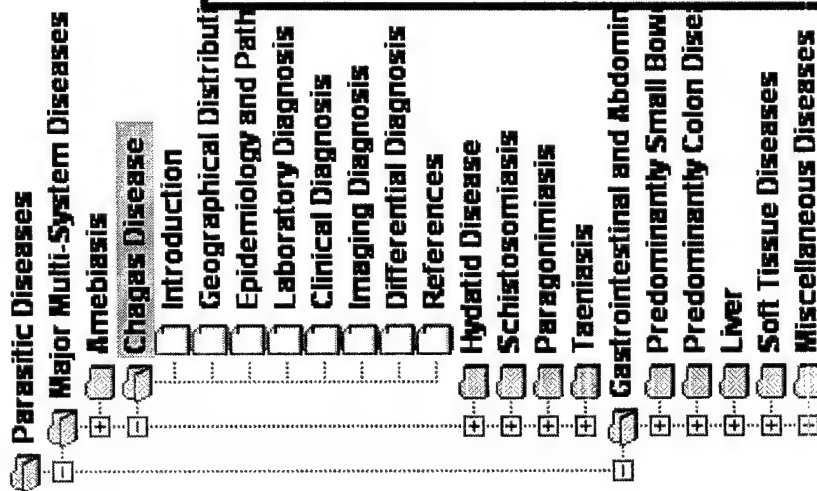
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- Parasitic Diseases
 - Major Multi-System Diseases
 - Amebiasis
 - Chagas Disease
 - Introduction
 - Geographical Distribution
 - Epidemiology and Pathology
 - Laboratory Diagnosis
 - Clinical Diagnosis
 - Imaging Diagnosis
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Home | About TCMR | Index of Diseases | TCMR Mission | TCMR Staff | TCMR Guestbook



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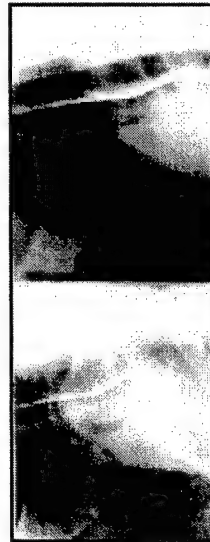
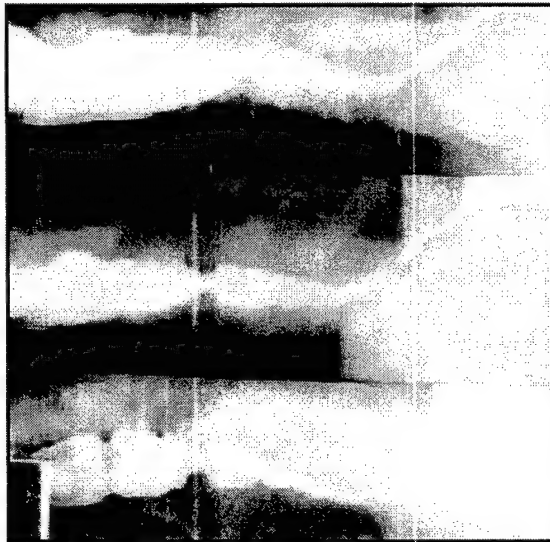
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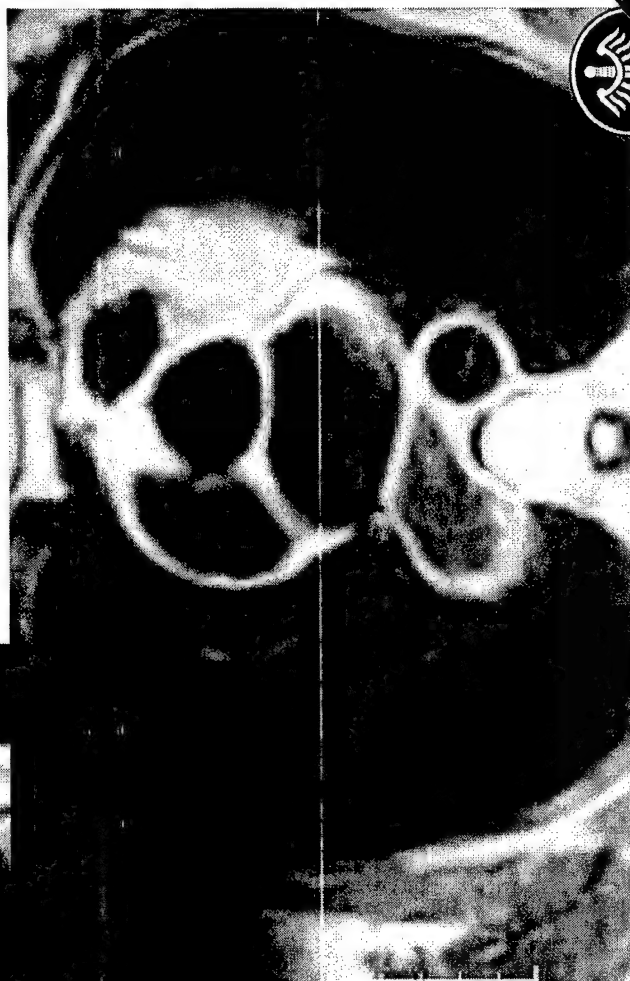
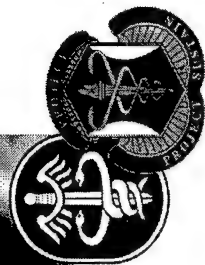


Esophagus

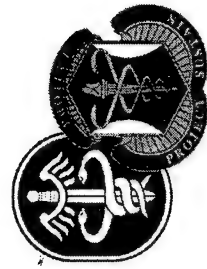
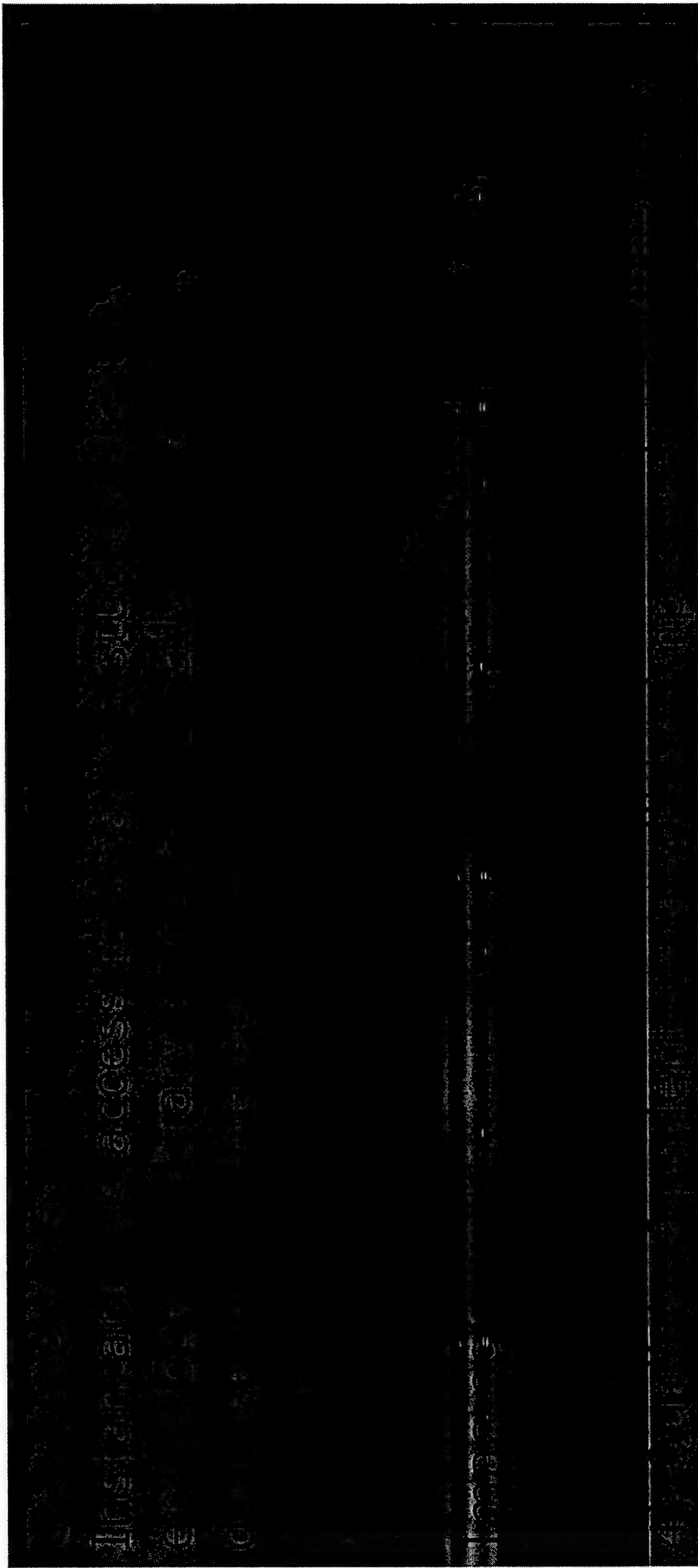
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Chapters	Name of Chapters	Chapters Belong To:				
Chapter 1	Amebiasis	Reeder				
Chapter 2	Schistosomiasis	Palmer				
Chapter 3	Hydatid Disease	Reeder				
Chapter 4	Chagas Disease	Reeder				
Chapter 5	Tuberculosis	Palmer				
Chapter 6	The Mycosis	Palmer				
Chapter 7	Taeniasis, Cysticercosis	Reeder				
Chapter 8	AIDS	Reeder				
Chapter 9	Giardiasis	Reeder				
Chapter 10	Ascariasis	Reeder				
Chapter 11	Anisakiasis	Reeder				
Chapter 12	Ancylostomiasis	Reeder				
Chapter 13	Strongyloidiasis	Reeder				
Chapter 14	Capillariasis	Reeder				
Chapter 15	Typhoid and Paratyphoid	Reeder				
Chapter 16	Tropical Sprue	Reeder				
Chapter 17	Trichuriasis	Reeder				
Chapter 18	Helminthoma	Palmer				
Chapter 19	Shigellosis	Palmer				
Chapter 20	Lymphogranuloma	Reeder				
Chapter 21	Clonorchiasis	Reeder				
Chapter 22	Paragonimiasis	Reeder				
Chapter 23	Melioidosis	Reeder				
Chapter 24	Plague	Reeder				
Chapter 25	Cardiac Disease	Palmer				
Chapter 26	Filariasis	Palmer				
Chapter 27	Dracunculiasis	Reeder				
Chapter 28	Pentastomiasis	Palmer				
Chapter 29	Tumoral Calcinosi	Palmer				
Chapter 30	Tropical Pyomyositis	Palmer				
Chapter 31	The Hemoglobinopathies	Reeder				
Chapter 32	Brucellosis	Palmer				
Chapter 33	Tetanus	Palmer				
Chapter 34	Leprosy	Palmer				

Chapter 35	Yaws	Palmer
Chapter 36	Tropical Ulcer	Palmer
Chapter 37	Ainhum	Reeder
Chapter 38	Scleroma	Reeder
Chapter 39	Noma	Reeder
Chapter 40	Small Pox	Palmer
Chapter 41	Burkitts Lymphoma	Palmer
Chapter 42	Kaposi Sarcoma	Reeder
Chapter 43	Malignant Neoplastic Diseases	Palmer
Chapter 44	NonMalignant Neoplastic Diseases	Palmer
Chapter 45	Toxoplasmosis	Palmer
Chapter 46	Fever	Palmer

Chapters	Approximate Number of Images Scanned	Images Belong To:	
Chapter 1	316	Reeder	
Chapter 2	235	Palmers	
Chapter 3	463	Reeder	
Chapter 4	81	Reeder	
Chapter 5	0	Palmers	Not Ready for Scanning
Chapter 6	0	Palmers	Not Ready for Scanning
Chapter 7	138	Reeder	
Chapter 8	106	Reeder	
Chapter 9	17	Reeder	
Chapter 10	79	Reeder	
Chapter 11	15	Reeder	
Chapter 12	30	Reeder	
Chapter 13	60	Reeder	
Chapter 14	19	Reeder	
Chapter 15	19	Reeder	
Chapter 16	0	Reeder	Not back from Publisher
Chapter 17	25	Reeder	
Chapter 18	9	Reeder	
Chapter 19	7	Palmers	
Chapter 20	14	Reeder	
Chapter 21	47	Reeder	
Chapter 22	87	Reeder	
Chapter 23	78	Reeder	
Chapter 24	22	Reeder	
Chapter 25	84	Palmers	
Chapter 26	48	Palmers	
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Chapter 28	15	Palmers	
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Chapter 33	12	Palmers	
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Chapter 35	60	Palmers	
Chapter 36	29	Palmers	
Chapter 37	24	Reeder	
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Chapter 39	9	Reeder	
Chapter 40	32	Palmers	
Chapter 41	54	Palmers	
Chapter 42	76	Reeder	
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Chapter 45	26	Palmers	
Chapter 46	23	Palmers	
Total	2922		